

ABSTRACT

ULTRASONIC PROBE DEVICE WITH RAPID ATTACHMENT AND DETACHMENT MEANS

5 An ultrasonic tissue ablation device comprising a transversely vibrating elongated probe, and a coupling assembly for probe attachment and detachment that enables the probe assembly and separation from the device body that includes the ultrasound energy source and a sound conductor, and a method of use for removal of vascular occlusions in blood vessels. The coupling assembly enables incorporation of elongated probes with

10 small cross sectional lumens such as a catheter guidewires. The probe detachability allows insertion manipulation and withdrawal independently of the device body. The probe can be used with acoustic and/or aspirations sheaths to enhance destruction and removal of an occlusion. The horn assembly of the device that contains a sound conducting horn functions as an energy regulator and reservoir for the probe, and

15 precludes loss of probe cavitation energy by its bending or damping within the blood vessel.